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ELLEIDGE

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EXAMINER

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ART UNIT

PAPER NUMBER

1636

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**09/122,384**

Applicant(s)  
**Elledge et al.**

Examiner  
**Remy Yucel**

Group Art Unit  
**1636**



☒ Responsive to communication(s) filed on Nov 22, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-36 is/are pending in the application.

Of the above, claim(s) 21-25, 27-29, and 36 is/are withdrawn from consideration.

☒ Claim(s) 35 is/are allowed.

☒ Claim(s) 1-20, 26, 30, 31, and 34 is/are rejected.

☒ Claim(s) 32 and 33 is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 16

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### **DETAILED ACTION**

Claims 1-36 are pending in the application. Claims 21-25, 27-29 and 36 have been withdrawn from consideration as being drawn to a non-elected invention.

This Office action is in response to the amendment filed 22 November 1999.

#### ***Response to Amendment***

The rejection of claims 1-20 and 26 under the judicially created doctrine of obviousness-type double patenting has been withdrawn in light of Applicant's proper terminal disclaimer filed 22 November 1999.

Claims 1, 6-20 and 26 stand rejected under 35 U.S.C. 112, first paragraph for the reasons made of record in the Office action mailed 18 August 1999.

Applicant's amendments have necessitated the following new grounds of rejection. Claims 1-20 and 26 are rejected under 35 U.S.C. 112, second paragraph.

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 22 November 1999 has necessitated the following new grounds of rejection. Claims 30, 31 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Hartley *et al.*

#### ***Response to Arguments***

In response to the rejection of claims 1, 6-20 and 26 (previously claims 3-20) Applicant contends that by amending the claims to include the recitation "gene expression" more specifically defines the recitation "regulatory element" and thus overcomes the rejection of record. Applicant

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then indicates a specific passage of the instant specification which define elements which regulate gene expression. This argument has been considered but is not found persuasive for the following reasons.

Firstly, the rejection of record was made under 35 U.S.C. 112, first paragraph and as set forth clearly in the Office action mailed 18 August 1999 was a scope of enablement rejection, not a rejection under 35 U.S.C. 112, second paragraph.

Secondly, Applicant has not indicated those portions of the specification which provide the teachings necessary for the skilled artisan to practice the broad scope of the instant claims. As set forth previously in the Office mailed 18 August 1999 at page 3:

An essential portion of Applicant's inventions is the presence of a promoter in the second nucleic acid construct. This is important because, in the presence of recombinase, the first second nucleic acid constructs will recombine such that the "nucleic acid of interest" found in the first nucleic acid construct will come under the **transcriptional** control of the promoter ("regulatory element") found in the second nucleic acid construct. Regulatory elements may not have all the properties of a promoter element and function as such.

In fact, Applicant's statement found at page 4, lines 7-10 fully corroborates the position of the Examiner presented in the Office action mailed 18 August 1999 and discussed immediately above. Applicant simply has not provided the teachings necessary for the skilled artisan to obtain transcriptional control of the "nucleic acid of interest" with regulatory elements other than promoters once it has been recombined into the second nucleic acid construct. The addition of the phrase "gene expression" does not remedy the deficiencies of the specification because "gene

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expression regulatory elements”, as Applicant admits at page 4 of the remarks, “serve as elements that regulate gene expression” in a variety of capacities. It is noted that all of the elements listed at page 4 of the remarks and in the specification are known to have different regulatory functions which result in both up and down regulation of gene expression but that promoters specifically regulate transcription as called for in Applicant’s invention. Therefore, claims 1, 6-20 and 26 stands rejected under 35 U.S.C. 112, first paragraph.

***New Grounds of Rejection***

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 30, 31 and 34 rejected under 35 U.S.C. 102(e) as being anticipated by Hartley *et al.*

The instant claims are drawn to methods for regulated recombination in host cells that constitutively express a recombinase. The methods comprise providing a cell which expresses recombinase, a first nucleic acid which, among other elements, has first and second site-specific

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recombinase sites which do not recombine with each other and a second nucleic acid which, among other elements, has third and fourth site-specific recombinase sites which do not recombine with each other such that recombination occurs only between the first and second nucleic acids.

Hartley *et al.* teach several embodiments of recombinational cloning. One particular embodiment they exemplify is a method in which the first nucleic acid contains (donor plasmid) a nucleic acid of interest and a first and a second site-specific recombination site which do not recombine with each other and the second nucleic acid contains a third and fourth recombination sites which do not recombine with each other is supplied along with a recombinase thereby allowing recombination to occur only between the first and second nucleic acid molecules. They teach that this method may be carried out either *in vitro* or *in vivo* (within a host cell) and that the recombinase may be supplied either as a protein or a construct which allows expression of the recombinase is transformed into the cell. It is clear that Hartley *et al.* recognized a means by which to control recombination between two desired nucleic acids is to eliminate the possibility of intramolecular recombination and that this is achieved by using site-specific recombination sites which cannot recombine with each other. Therefore, Hartley *et al.* teach that which is recited by the instant claims.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-20 and 26 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2, 6-20 and 26 contain the recitation “gene expression regulatory element”. This recitation renders the claims indefinite because it is not clear how gene expression regulatory element” differs from “regulatory element”. The term “gene expression regulatory element” is not clearly defined, therefore, the distinction between “gene expression regulatory element” and “regulatory element” is not clear. Further the metes and bounds of the claim cannot be established because it is not known what is encompassed by the term “gene expression regulatory element” versus “regulatory element”.

Claims 3-5 contain the recitation “wherein said nucleic acid of interest comprises a fusion peptide”. It is not clear how a nucleic acid can comprise a fusion peptide. It is possible that Applicant wishes to claim a method in which the nucleic acid encodes a fusion peptide. Clarification is appropriate.

***Allowable Subject Matter***

Claim 35 is allowed.

Claims 32 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Also, Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 22 November 1999 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Certain papers related to this application may be submitted to Art Unit 1636 by facsimile transmission. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR § 1.6 (d)). The Group 1600 FAX numbers are (703) 308-4242 or (703) 305-3014. Unofficial faxes may be sent to the examiner at (703) 305-7939. NOTE: If applicant *does* submit a paper




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by fax, the original signed copy should be retained by Applicant or Applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Remy Yucel, Ph. D. whose telephone number is (703) 305-1998. The examiner can normally be reached on Monday through Fridays from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. George Elliott can be reached at (703) 308-4003.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

  
Remy Yucel, Ph. D.  
February 1, 2000